

SEQUENCE LISTING

<110> HUANG, QIHONG
 REED, JOHN C.
 DEVERAUX, QUINN L.
 MAEDA, SUSUMU

<120> INHIBITOR OF APOPTOSIS PROTEINS AND NUCLEIC ACIDS AND
 METHODS FOR MAKING AND USING THEM

<130> 087102/027 2537

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<150> 60/260,478

<151> 2001-01-08

<160> 25

<170> PatentIn Ver. 2.1

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Pro Phe Val Glu Ala Ala Arg Leu Ala Thr Phe Lys Asp Trp Pro Arg
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Arg Met Arg Gln Lys Pro Glu Glu Leu Ala Glu Ala Gly Phe Phe Tyr
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Thr Gly Gln Gly Asp Lys Thr Lys Cys Phe Tyr Cys Asp Gly Gly Leu
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Lys Asp Trp Glu Ser Asp Asp Val Pro Trp Glu Gln His Ala Arg Trp
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Glu Gly Asp Asp Pro Ala Lys Asp His Gln Arg Trp Ala Pro Gln Cys
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Cys Met Arg Gln Lys Pro Glu Glu Leu Ala Glu Ala Gly Phe Phe Tyr
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Thr Gly Gln Gly Asp Lys Thr Lys Cys Phe Tyr Cys Asp Gly Gly Leu
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115 120 125

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Glu Asp Glu Arg Ile Lys Thr Phe Glu Lys Trp Pro Val Ser Phe Leu
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Ser Gly Glu Gln Leu Ala Arg Asn Gly Phe Tyr Tyr Leu Gly Arg Gly
20 25 30

Asp Glu Val Arg Cys Ala Phe Cys Lys Val Glu Ile Met Arg Trp Val
35 40 45

Glu Gly Asp Asp Pro Ala Lys Asp His Gln Arg Trp Ala Pro Gln Cys
50 55 60

Pro Phe Val Glu Ala Ala Arg Leu Arg Ser Phe Lys Asp Trp Pro Arg
65 70 75 80

Cys Met Arg Gln Lys Pro Glu Glu Leu Ala Glu Ala Gly Phe Phe Tyr
85 90 95

Thr Gly Gln Gly Asp Lys Thr Lys Cys Phe Tyr Cys Asp Gly Gly Leu
100 105 110

Lys Asp Trp Glu Asn Asp Asp Val Pro Trp Glu Gln His Ala Arg Trp
115 120 125

Phe Asp Arg Cys Ala Tyr Val Leu Cys Lys Ile Cys Phe Ala Glu Glu
130 135 140

Arg Asn Val Cys Phe Val Pro Cys Gly His Val Val Ala Cys Ala Lys
145 150 155 160

Cys Ala Leu Ala Ala Asp Lys Cys Pro Met Cys Arg
165 170

<210> 11

<211> 172

<212> PRT

<213> Cydia pomonella granulovirus

<400> 11

Glu Asp Val Arg Leu Asn Thr Phe Glu Lys Trp Pro Val Ser Phe Leu
1 5 10 15

Ser Pro Glu Thr Met Ala Lys Asn Gly Phe Tyr Tyr Leu Gly Arg Ser
20 25 30

Asp Glu Val Arg Cys Ala Phe Cys Lys Val Glu Ile Met Arg Trp Lys
35 40 45

Glu Gly Glu Asp Pro Ala Ala Asp His Lys Lys Trp Ala Pro Gln Cys
50 55 60

Pro Phe Val Glu Ala Ala Arg Val Lys Ser Phe His Asn Trp Pro Arg
65 70 75 80

Cys Met Lys Gln Arg Pro Glu Gln Met Ala Asp Ala Gly Phe Phe Tyr
85 90 95

Thr Gly Tyr Gly Asp Asn Thr Lys Cys Phe Tyr Cys Asp Gly Gly Leu
100 105 110

Lys Asp Trp Glu Pro Glu Asp Val Pro Trp Glu Gln His Val Arg Trp
115 120 125

Phe Asp Arg Cys Ala Tyr Val Leu Cys Lys Ile Cys Tyr Val Glu Glu
130 135 140

Cys Ile Val Cys Phe Val Pro Cys Gly His Val Val Ala Cys Ala Lys
145 150 155 160

Cys Ala Leu Ser Val Asp Lys Cys Pro Met Cys Arg
165 170

<210> 12

<211> 172

<212> PRT

<213> Orgyia pseudotsugata

<400> 12

Lys Ala Ala Arg Leu Gly Thr Tyr Thr Asn Trp Pro Val Gln Phe Leu
1 5 10 15

Glu Pro Ser Arg Met Ala Ala Ser Gly Phe Tyr Tyr Leu Gly Arg Gly
 20 25 30

Asp Glu Val Arg Cys Ala Phe Cys Lys Val Glu Ile Thr Asn Trp Val
 35 40 45

Arg Gly Asp Asp Pro Glu Thr Asp His Lys Arg Trp Ala Pro Gln Cys
 50 55 60

Pro Phe Val Glu Ala Ala Arg Leu Arg Thr Phe Ala Glu Trp Pro Arg
 65 70 75 80

Gly Leu Lys Gln Arg Pro Glu Glu Leu Ala Glu Ala Gly Phe Phe Tyr
 85 90 95

Thr Gly Gln Gly Asp Lys Thr Arg Cys Phe Cys Cys Asp Gly Gly Leu
 100 105 110

Lys Asp Trp Glu Pro Asp Asp Ala Pro Trp Gln Gln His Ala Arg Trp
 115 120 125

Tyr Asp Arg Cys Glu Tyr Val Leu Cys Lys Ile Cys Leu Gly Ala Glu
 130 135 140

Lys Thr Val Cys Phe Val Pro Cys Gly His Val Val Ala Cys Gly Lys
 145 150 155 160

Cys Ala Ala Gly Val Thr Thr Cys Pro Val Cys Arg
 165 170

<210> 13

<211> 172

<212> PRT

<213> *Drosophila melanogaster*

<400> 13

Glu Glu Thr Arg Leu Lys Thr Phe Thr Asp Trp Pro Leu Asp Trp Leu
 1 5 10 15

Asp Lys Arg Gln Leu Ala Gln Thr Gly Met Tyr Phe Thr His Ala Gly
 20 25 30

Asp Lys Val Lys Cys Phe Phe Cys Gly Val Glu Ile Gly Cys Trp Glu
 35 40 45

Gln Glu Asp Gln Pro Val Pro Glu His Gln Arg Trp Ser Pro Asn Cys
 50 55 60

Pro Leu Leu Glu Thr Ala Arg Leu Arg Thr Phe Glu Ala Trp Pro Arg
 65 70 75 80

Asn Leu Lys Gln Lys Pro His Gln Leu Ala Glu Ala Gly Phe Phe Tyr
 85 90 95

Thr Gly Val Gly Asp Arg Val Arg Cys Phe Ser Cys Gly Gly Gly Leu
 100 105 110

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<210> 14
<211> 68
<212> PRT
<213> Bombyx mori
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<210> 15
<211> 68
<212> PRT
<213> Spodoptera frugiperda
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<400> 15
Glu Ala Ala Arg Leu Arg Ser Phe Lys Asp Trp Pro Arg Cys Met Arg
  1                    5                10                15
Gln Lys Pro Glu Glu Leu Ala Glu Ala Gly Phe Phe Tyr Thr Gly Gln
          20                25                30
Gly Asp Lys Thr Lys Cys Phe Tyr Cys Asp Gly Gly Leu Lys Asp Trp
          35                40                45
Glu Asn His Asp Val Pro Trp Glu Gln His Ala Arg Trp Phe Asp Arg
          50                55                60
Cys Ala Tyr Val
  65

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<210> 16
 <211> 68
 <212> PRT
 <213> *Trichoplusia ni*

<400> 16
 Glu Ala Ala Arg Leu Arg Ser Phe Lys Asp Trp Pro Arg Cys Met Arg
 1 5 10 15
 Gln Lys Pro Glu Glu Leu Ala Glu Ala Gly Phe Phe Tyr Thr Gly Gln
 20 25 30
 Gly Asp Lys Thr Lys Cys Phe Tyr Cys Asp Gly Gly Leu Lys Asp Trp
 35 40 45
 Glu Asn Asp Asp Val Pro Trp Glu Gln His Ala Arg Trp Phe Asp Arg
 50 55 60
 Cys Ala Tyr Val
 65

<210> 17
 <211> 68
 <212> PRT
 <213> *Cydia pomonella granulovirus*

<400> 17
 Glu Ala Ala Arg Val Lys Ser Phe His Asn Trp Pro Arg Cys Met Lys
 1 5 10 15
 Gln Arg Pro Glu Gln Met Ala Asp Ala Gly Phe Phe Tyr Thr Gly Tyr
 20 25 30
 Gly Asp Asn Thr Lys Cys Phe Tyr Cys Asp Gly Gly Leu Lys Asp Trp
 35 40 45
 Glu Pro Glu Asp Val Pro Trp Glu Gln His Val Arg Trp Phe Asp Arg
 50 55 60
 Cys Ala Tyr Val
 65

<210> 18
 <211> 68
 <212> PRT
 <213> *Orgyia pseudotsugata*

<400> 18
 Glu Ala Ala Arg Leu Arg Thr Phe Ala Glu Trp Pro Arg Gly Leu Lys
 1 5 10 15
 Gln Arg Pro Glu Glu Leu Ala Glu Ala Gly Phe Phe Tyr Thr Gly Gln
 20 25 30
 Gly Asp Lys Thr Arg Cys Phe Cys Cys Asp Gly Gly Leu Lys Asp Trp
 35 40 45

Glu Pro Asp Asp Ala Pro Trp Gln Gln His Ala Arg Trp Tyr Asp Arg
 50 55 60

Cys Glu Tyr Val
 65

<210> 19

<211> 68

<212> PRT

<213> *Drosophila melanogaster*

<400> 19

Glu Thr Ala Arg Leu Arg Thr Phe Glu Ala Trp Pro Arg Asn Leu Lys
 1 5 10 15

Gln Lys Pro His Gln Leu Ala Glu Ala Gly Phe Phe Tyr Thr Gly Val
 20 25 30

Gly Asp Arg Val Arg Cys Phe Ser Cys Gly Gly Gly Leu Met Asp Trp
 35 40 45

Asn Asp Asn Asp Glu Pro Trp Glu Gln His Ala Leu Trp Leu Ser Gln
 50 55 60

Cys Arg Phe Val
 65

<210> 20

<211> 37

<212> PRT

<213> *Bombyx mori*

<400> 20

Leu Cys Lys Ile Cys Tyr Ser Glu Glu Arg Asn Val Cys Phe Val Pro
 1 5 10 15

Cys Gly His Val Val Ala Cys Ala Lys Cys Ala Leu Ser Thr Asp Lys
 20 25 30

Cys Pro Met Cys Arg
 35

<210> 21

<211> 37

<212> PRT

<213> *Spodoptera frugiperda*

<400> 21

Leu Cys Lys Ile Cys Tyr Ala Glu Glu Arg Asn Val Cys Phe Val Pro
 1 5 10 15

Cys Gly His Val Val Ala Cys Ala Lys Cys Ala Leu Ala Ala Asp Lys
 20 25 30

Cys Pro Met Cys Arg
35

<210> 22
<211> 37
<212> PRT
<213> Trichoplusia ni

<400> 22
Leu Cys Lys Ile Cys Phe Ala Glu Glu Arg Asn Val Cys Phe Val Pro
1 5 10 15

Cys Gly His Val Val Ala Cys Ala Lys Cys Ala Leu Ala Ala Asp Lys
20 25 30

Cys Pro Met Cys Arg
35

<210> 23
<211> 37
<212> PRT
<213> Cydia pomonella granulovirus

<400> 23
Leu Cys Lys Ile Cys Tyr Val Glu Glu Cys Ile Val Cys Phe Val Pro
1 5 10 15

Cys Gly His Val Val Ala Cys Ala Lys Cys Ala Leu Ser Val Asp Lys
20 25 30

Cys Pro Met Cys Arg
35

<210> 24
<211> 37
<212> PRT
<213> Orgyia pseudotsugata

<400> 24
Leu Cys Lys Ile Cys Leu Gly Ala Glu Lys Thr Val Cys Phe Val Pro
1 5 10 15

Cys Gly His Val Val Ala Cys Gly Lys Cys Ala Ala Gly Val Thr Thr
20 25 30

Cys Pro Val Cys Arg
35

<210> 25
<211> 37
<212> PRT
<213> Drosophila melanogaster

Leu Cys Lys Ile Cys Tyr Gly Ala Glu Tyr Asn Thr Ala Phe Leu Pro
1 5 10 15

Cys Gly His Val Val Ala Cys Ala Lys Cys Ala Ser Ser Val Thr Lys
20 25 30

Cys Pro Leu Cys Arg
35